

From: (b) (6), (b) (7)(C)

To: (b) (6), (b) (7)(C)

Cc: (b) (6), (b) (7)(C)

Subject: FINAL (yes, really) C2 TI deck

Date: Wednesday, November 23, 2016 1:15:22 PM

Attachments: [C2 TI Requirements Deck INTERNAL 11_23_2016 FINAL.pptx](#)

C2 meeting was bumped up to 2 pm EST today. Attached is the final deck.

Regards,

(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

Branch Chief, Communications and Workforce Strategy
Border Patrol & Air and Marine Program Management Office
Facilities Management and Engineering
Office of Facilities and Asset Management

(b) (6), (b) (7)(C)

CBP Enterprise Services

Office of Facilities and Asset Management

Overview of CBP Fence and Roads

November 23, 2016



U.S. Customs and
Border Protection



BW11 FOIA CBP 003099



Map of Existing Fence

(b) (7)(E)



A Foundation on Which to Build Fence

- CBP was tasked with building 700 miles of “two layer” fencing on the southwest border which was later changed to meet USBP operational requirements of 654 miles of primary fence.
- This was tasked to CBP in July 2007, with over 600 miles completed by January 20, 2009.
- 654 miles of primary fence have been completed to date, with the majority of mileage completed between 2008 and 2009.



Map of Existing & Proposed Fence

(b) (7)(E), (b) (5)

This is a high level view of proposed requirements refinements of geospatial lines in progress



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Summary of Unconstrained Operational Needs & Cost Estimates

| Southwest Border | | | | |
|-----------------------------|------------|--|---|----------------------|
| Requirement Type | New Miles | Acquisition/Initial Costs ROM (-50%/+100%) Cost | 20 Year Recurring Costs (Maintenance and Repair) | Total End State Cost |
| New Primary PF | (b) (7)(E) | \$ | (b) (5) | (5) |
| New VF | | \$ | | |
| Replacement Primary PF & VF | | \$ | | |
| New Secondary PF | | \$ | | |
| New Roads | | \$ | | |
| Repairs to Existing Roads | | \$ | | |
| Total Costs | | \$ | | |
| | | | | |
| Requirement Type | New Miles | A | (b) (5) | (5) |
| New Primary PF | (b) (7)(E) | \$ | | |
| New VF | | \$ | | |
| Replacement Primary PF & VF | | \$ | | |
| New Secondary PF | | \$ | | |
| New Roads | | \$ | | |
| Repairs to Existing Roads | | \$ | | |
| Total Costs | | \$ | | |



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Summary of Unconstrained Operational Needs & Cost Estimates

| Southwest and Northern Border | | | | |
|-------------------------------|------------|--|---|----------------------|
| Requirement Type | New Miles | Acquisition/Initial Costs ROM (-50%/+100%) Cost | 20 Year Recurring Costs (Maintenance and Repair) | Total End State Cost |
| New Primary PF | (b) (7)(E) | \$ | (b) (5) | |
| New VF | | \$ | | |
| Replacement Primary PF & VF | | \$ | | |
| New Secondary PF | | \$ | | |
| New Roads | | \$ | | |
| Repairs to Existing Roads | | \$ | | |
| Total Costs | | \$ | | |

Unconstrained operational needs at the beginning of the planning process do not necessarily reflect the feasibility of the ultimate execution of those needs. These miles do not reflect the critical need nor do they reflect alternate enforcement solutions.

*****Statement pending USBP Approval / Edits*****



Quickest Wins

- Replacement of 184.4 primary pedestrian and vehicle fence in El Centro, Tucson, and El Paso where CBP already has real estate access and environmental analysis has been completed.

(b) (5)

- The right to access, construct, maintain, and repair tactical infrastructure in many areas of the border is secured through the Roosevelt Reservation: a 1907 Executive Order authorizing federal property rights within 60-feet of the international border in CA, AZ, & NM. The Roosevelt Reservation is the basis for CBP property rights along much of the border fence.





Estimated High Level Timeline

Overall Project Assumptions:

- 1)
- 2)
- 3)

(b) (5)

Notice to
Proceed
(NTP)

NTP + 12
months

NTP + 24
months

NTP + 36
months

(b) (5)

Construction Phase Assumptions:

- 1)

(b) (5)



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Quick Win Timeline

Quick Win Assumptions:

1
2
3

(b) (5)

Notice to
Proceed
(NTP)

NTP + 12
months

NTP + 24
months

NTP + 36
months

Acquisition

Design

Environmental

*Real
Estate*

(b) (5)



Approach to Fence Construction

- **Cost:**

- Primary PF: (b) (5) per mile
 - Average of (b) (5)/mile for real estate and environmental planning, construction and construction oversight.
 - (b) (5)/mile for mileage in all Sectors except Laredo & RGV
 - (b) (5) mile for mileage in Laredo & RGV
 - (b) (5) mile for environmental mitigation
 - (b) (5) mile for real estate acquisition
 - (b) (5) mile for staffing increases required to support the program
- Secondary PF: (b) (5) per mile
 - Average of (b) (5) mile for real estate and environmental planning, construction and construction oversight – also include (b) (5) mile for road between layers of fence
 - (b) (5) mile for environmental mitigation
 - (b) (5) mile for real estate acquisition
 - (b) (5) mile for staffing increases required to support the program



Approach to Fence Construction

- **Cost (continued)**

- VF: (b) (5) per mile

- Average of (b) (5)/mile for real estate and environmental planning, construction and construction oversight.
 - (b) (5)/mile for environmental mitigation
 - (b) (5)/mile for real estate acquisition
 - (b) (5)/mile for staffing increases required to support the program

- **Government Furnished Material (GFM) and Supply Chain:**

- (b) (5)

- **Procurement**

- (b) (5)
 - (b) (5)
 - (b) (5)



Approach to Complete Fence Construction

- Other Considerations (slide 1 of 2)

(b) (5)



Approach to Complete Fence Construction

- Other Considerations (slide 2 of 2)

(b) (5)



BACKUP



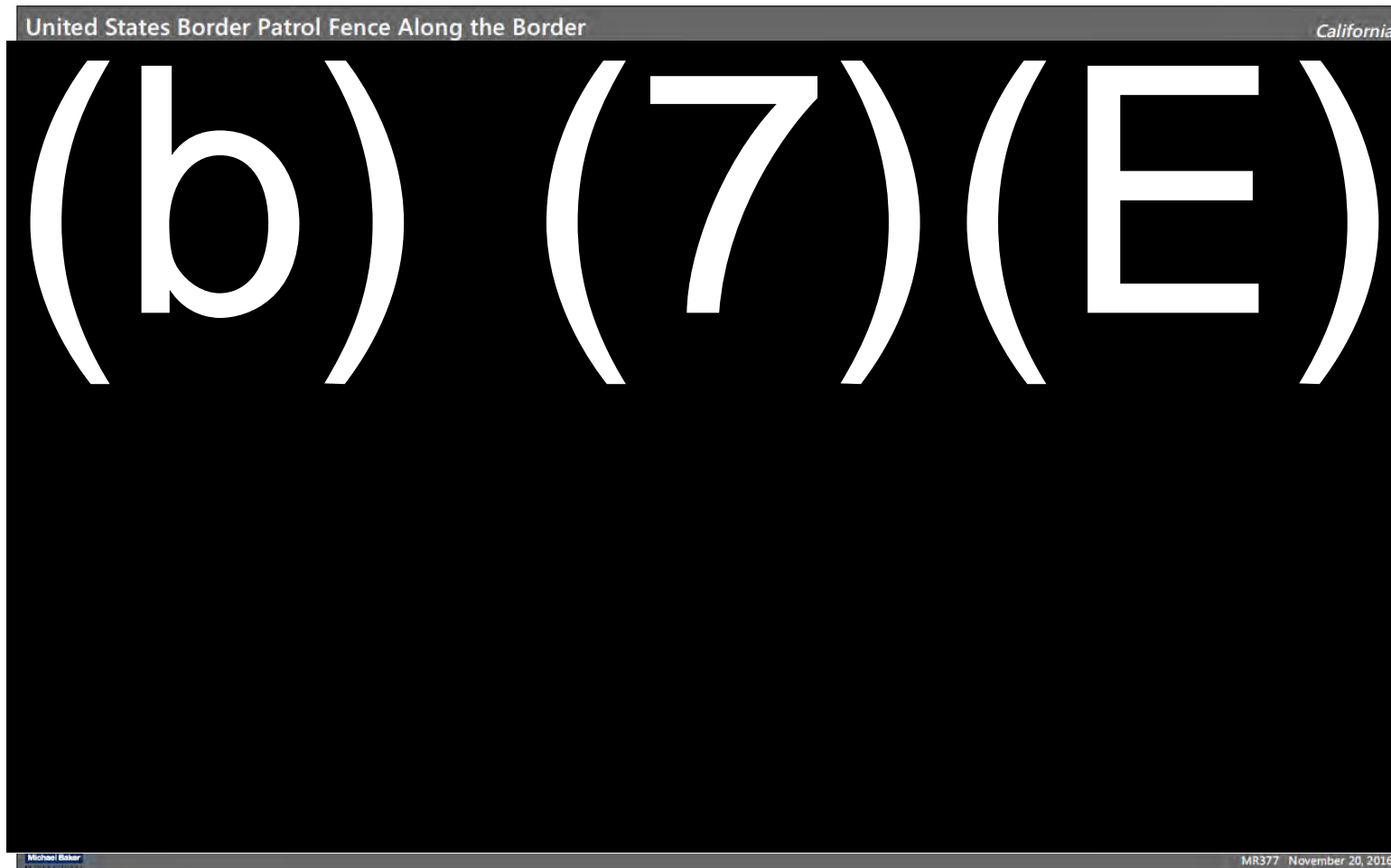
Border Fence Overview

- To date, U.S. Customs and Border Protection (CBP) completed **654 miles of primary pedestrian and vehicle fence**.
 - Border Fence provides persistent impedance to illegal cross-border activity, which offers Border Patrol agents more time to respond to and resolve threats.
 - CBP has completed three main fence programs since the enactment of the Secure Fence Act in 2006: Pedestrian Fence (PF) 70, PF 225, and Vehicle Fence (VF) 300. Any fence constructed prior to these programs is considered “legacy.”*
 - Tactical Infrastructure (TI) also includes gates; roads, bridges and boat ramps; drainage structures and grates; lighting and electrical systems; and vegetation and debris removal.

| Sector | Pedestrian Fence | | | | Vehicle Fence |
|-------------------------|------------------|-----------|----------|----------|---------------|
| | Primary | Secondary | Tertiary | TOTAL PF | TOTAL VF |
| Big Bend (BBT) | (b) (7)(E) | | | | |
| Del Rio (DRT) | | | | | |
| El Centro (ELC) | | | | | |
| El Paso (EPT) | | | | | |
| Laredo (LRT) | | | | | |
| Rio Grande Valley (RGV) | | | | | |
| San Diego (SDC) | | | | | |
| Tucson (TCA) | | | | | |
| Yuma (YUM) | | | | | |
| TOTAL | | | | | |



Maps – Current Fence, California



Please Note: This is a high level view of proposed requirements refinements of geospatial lines in progress



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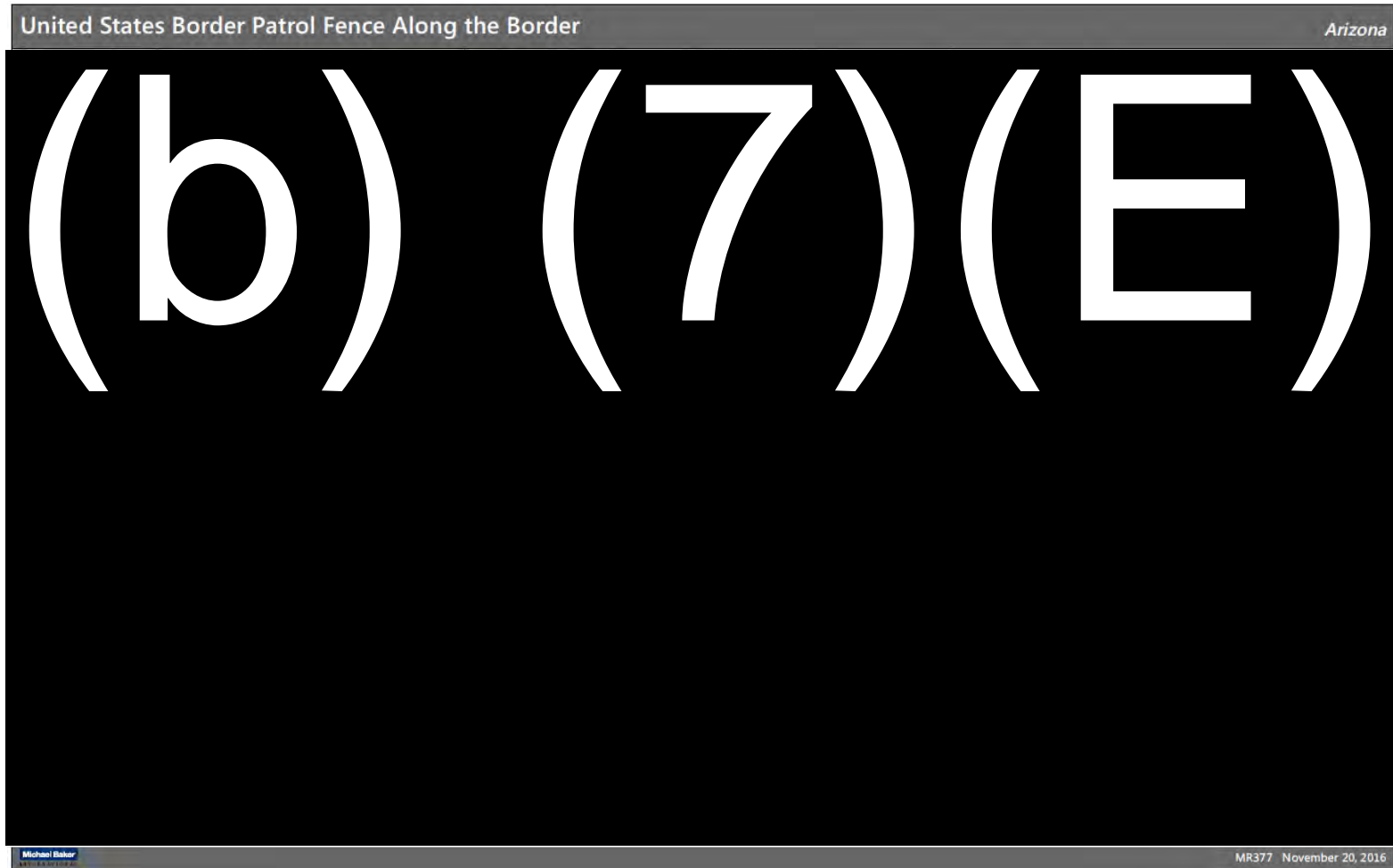
Maps – Current & Proposed Fence, California

(b) (7)(E), (b) (5)





Maps – Current Fence, Arizona



Please Note: This is a high level view of proposed requirements refinements of geospatial lines in progress



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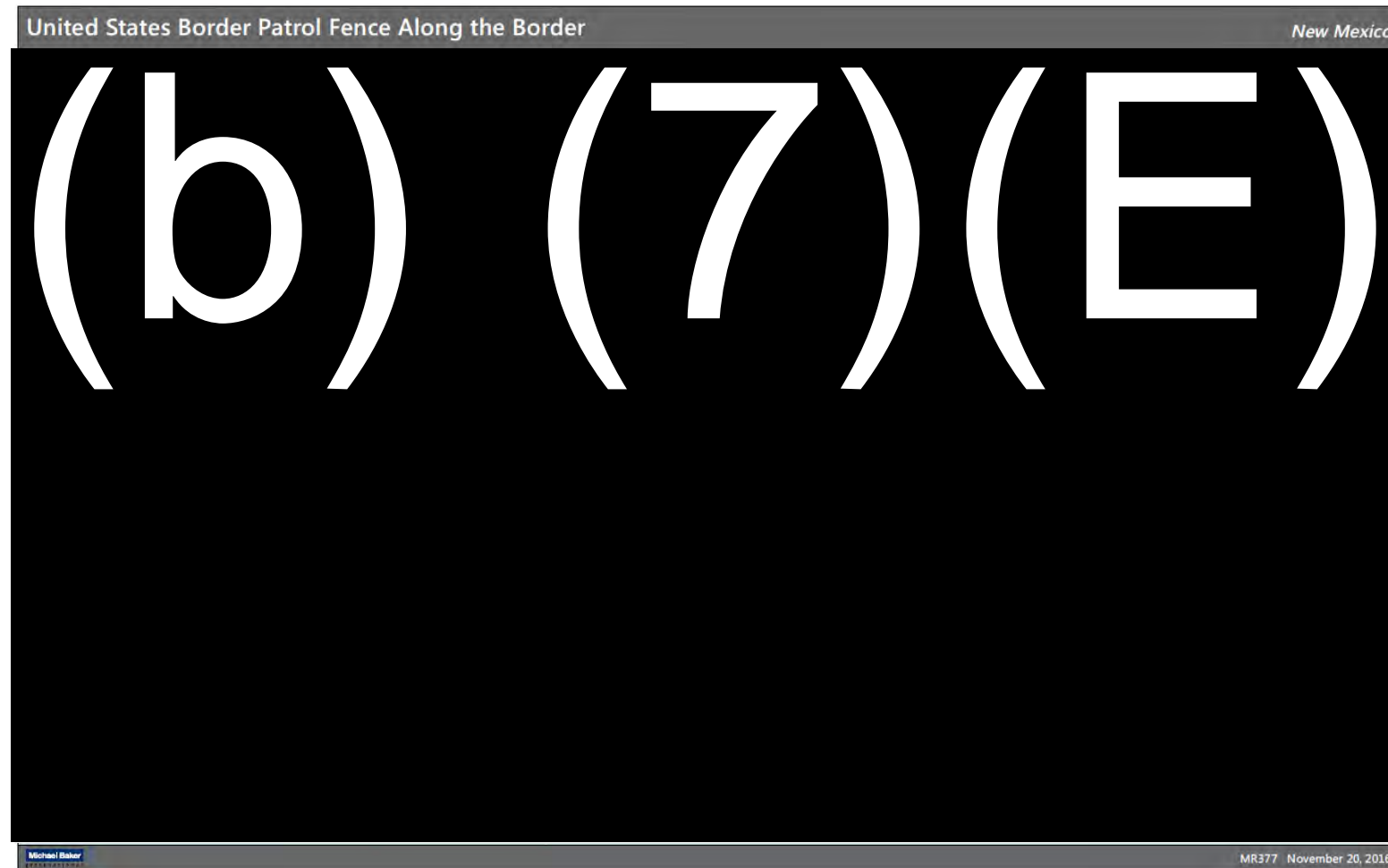
Maps – Current & Proposed Fence, Arizona

(b) (7)(E), (b) (5)





Maps – Current Fence, New Mexico



Please Note: This is a high level view of proposed requirements refinements of geospatial lines in progress



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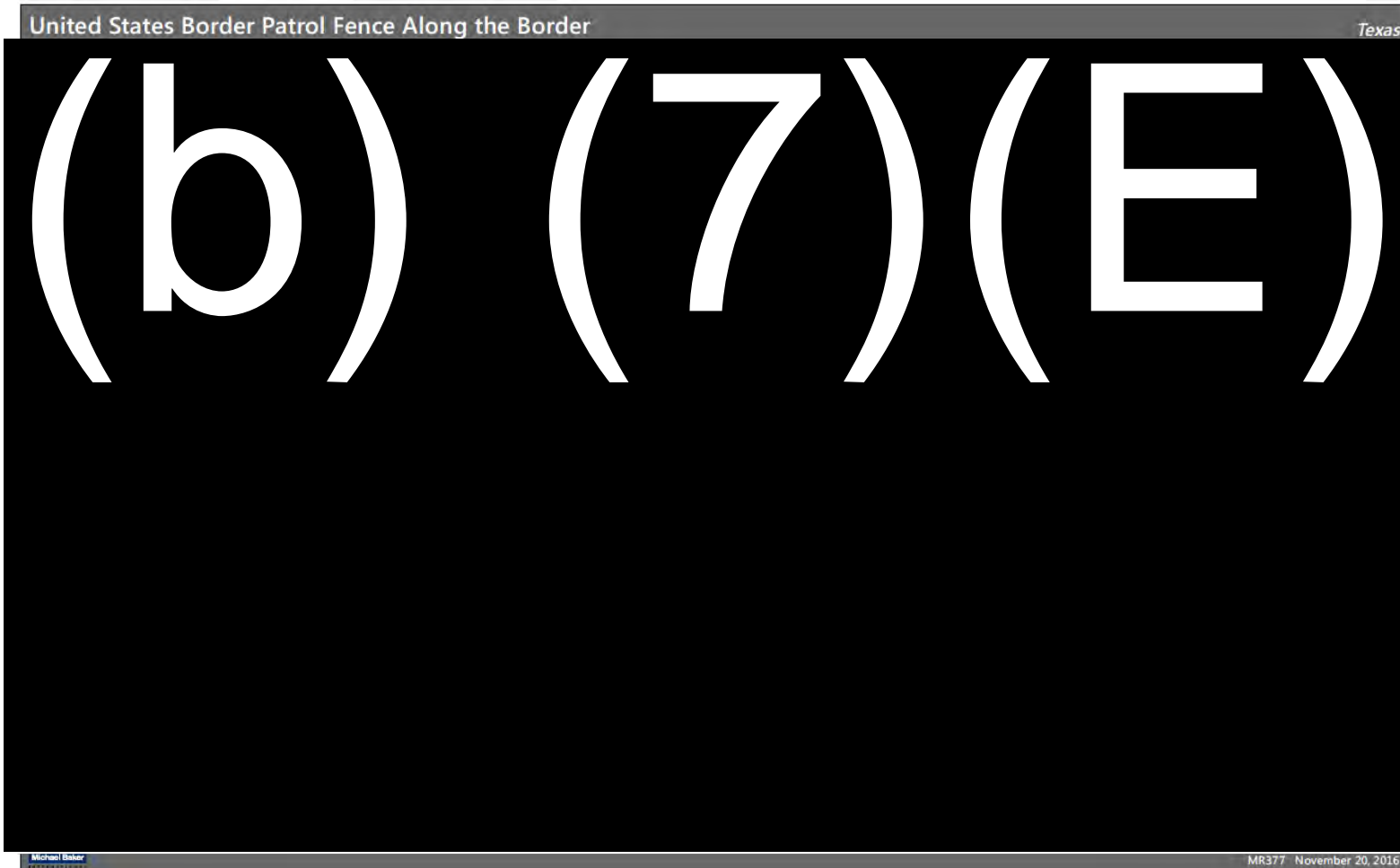
Maps – Current & Proposed Fence, New Mexico

(b) (7)(E), (b) (5)





Maps – Current Fence, Texas



Please Note: This is a high level view of proposed requirements refinements of geospatial lines in progress



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Maps – Current & Proposed Fence Fence, Texas

(b) (7)(E), (b) (5)



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Maps – Current & Proposed Fence Fence, Washington

(b) (7)(E), (b) (5)





Maps – Proposed Fence, Idaho

(b) (5)



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Maps – Current & Proposed Fence, Montana

(b) (7)(E), (b) (5)





Maps – Proposed Fence, New York

(b) (5)





Maps – Proposed Fence, Vermont

(b) (5)



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Maps – Proposed Fence, New Hampshire

(b) (5)



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Maps – Proposed Fence, Maine

(b) (5)





Proposed New Fencing

(b) (5)

(b) (5)



(b) (5)

(b) (5)



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All Fence Requirements – Primary, PF & VF

| Sector | Existing VF | New Miles VF | ROM (-50/+100) Acquisition Cost VF | Existing Primary PF | New Miles Primary PF | ROM (-50/+100) Acquisition Cost Primary PF |
|---------------------------|-------------|--------------|---------------------------------------|------------------------|-------------------------|--|
| Northern Border Total | (b) (7)(E) | (b) (7)(E) | \$ (b) (5) | (b) (7)(E) | (b) (7)(E) | \$ (b) (5) |
| BLW | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| BUN | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| DTM | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| GFN | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| HLT | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| HVM | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| SPW | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| SWB | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| Southwest Border Total | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| BBT | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| DRT | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| ELC | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| EPT | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| LRT | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| RGV | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| SDC | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| TCA | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| YUM | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |
| Grand Total | (b) (7)(E) | (b) (7)(E) | \$ | (b) (7)(E) | (b) (7)(E) | \$ |





All Fence Requirements – Replacement PF & Secondary PF

| Sector | Replacement Miles PF | ROM (-50/+100) Acquisition Cost Replacement PF | Existing Secondary PF | New Miles Secondary PF | ROM (-50/+100) Acquisition Cost Secondary PF | Existing Tertiary PF |
|------------------------|----------------------|--|-----------------------|------------------------|--|----------------------|
| Northern Border Total | (b) (7)(E) | \$ (b) (5) | (b) (7)(E) | (b) (7)(E) | \$ (b) (5) | (b) (7)(E) |
| BLW | | \$ | | | \$ | |
| BUN | | \$ | | | \$ | |
| DTM | | \$ | | | \$ | |
| GFN | | \$ | | | \$ | |
| HLT | | \$ | | | \$ | |
| HVM | | \$ | | | \$ | |
| SPW | | \$ | | | \$ | |
| SWB | | \$ | | | \$ | |
| Southwest Border Total | | \$ | | | \$ | |
| BBT | | \$ | | | \$ | |
| DRT | | \$ | | | \$ | |
| ELC | | \$ | | | \$ | |
| EPT | | \$ | | | \$ | |
| LRT | | \$ | | | \$ | |
| RGV | | \$ | | | \$ | |
| SDC | | \$ | | | \$ | |
| TCA | | \$ | | | \$ | |
| YUM | | \$ | | | \$ | |
| Grand Total | | \$ | | | \$ | |





Border Fence Photos – Legacy for Replacement

Pedestrian Fence – Bollard & Legacy



Pedestrian Fence – Legacy



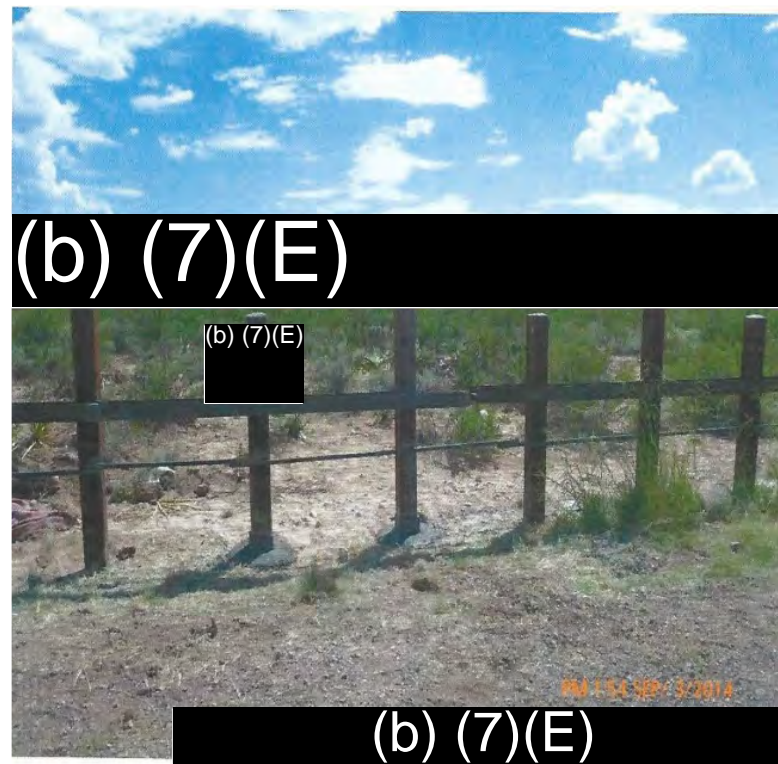


Border Fence Photos – VF Designs

Vehicle Fence – Normandy



Vehicle Fence – Post/Rail



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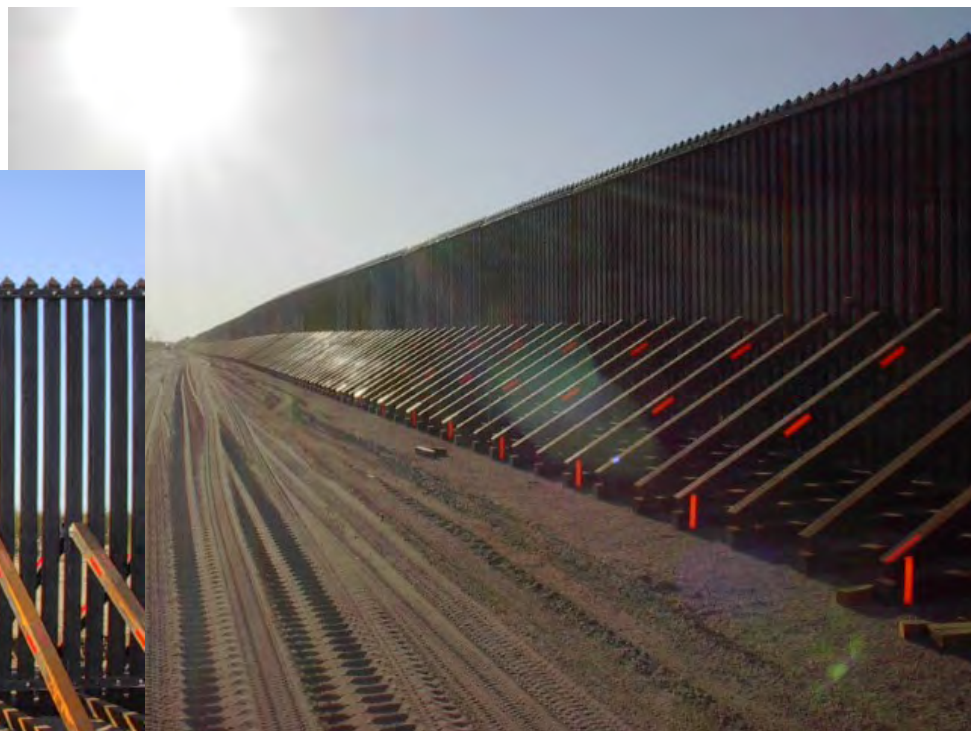
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Border Fence Photos – Floating Fence Design

Pedestrian Fence – Floating Fence – El Centro Sector



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Border Fence Photos – Preferred PF Design

Pedestrian Fence – PV-1 Bollard Tucson Sector



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Border Fence Photos – Preferred PF Design

Pedestrian Fence – PV-1 Bollard Tucson Sector



Pedestrian Fence – PV-1 Bollard Yuma Sector



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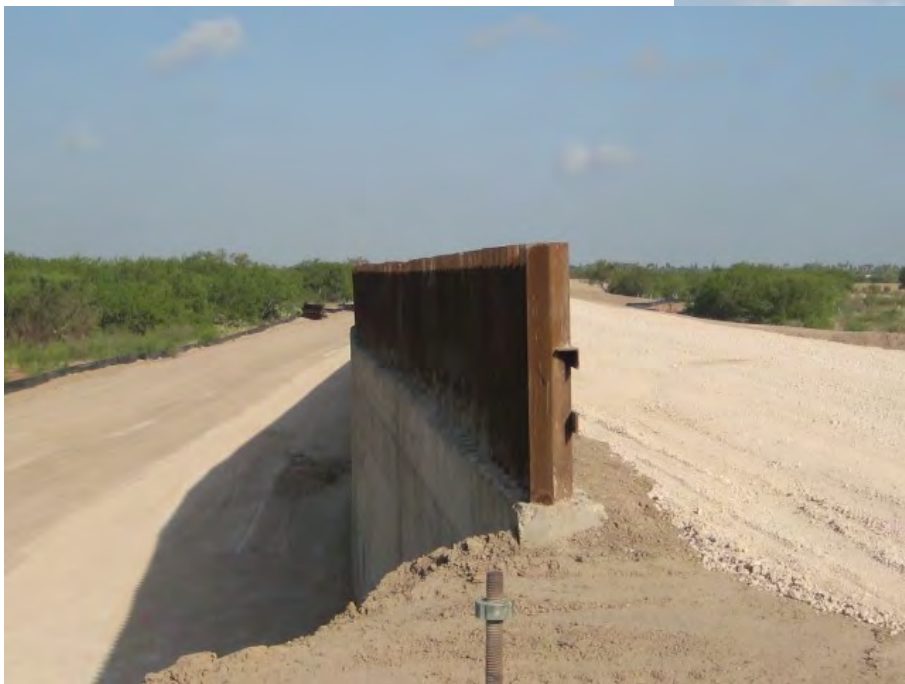
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Border Fence Photos – Levee Wall

Pedestrian “Flevee” – Fence on Levee



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Approach to Fence Construction

- **Costs to Construct Primary PF (same for fence replacement costs)**

- On average, cost to construct primary pedestrian or replace primary pedestrian fence is approximately (b) (5) per mile.
- Estimate is a rough order of magnitude (-50/+100) and includes project planning and oversight, environmental planning and compliance, environmental mitigation, real estate planning and acquisition, staffing and human capital requirements, design and construction.

- **Cost to Construct Secondary PF**

- On average, cost to construct secondary PF is approximately (b) (5) per mile.
- Estimate is a rough order of magnitude (-50/+100) and includes project planning and oversight, environmental planning and compliance, environmental mitigation, real estate planning and acquisition, staffing and human capital requirements, design and construction.

(b) (5)

- **Costs to Construct VF**

- On average, cost to construct vehicle fence fence is approximately (b) (5) per mile.
- Estimate is a rough order of magnitude (-50/+100) and includes project planning and oversight, environmental planning and compliance, environmental mitigation, real estate planning and acquisition, staffing and human capital requirements, design and construction.





Approach to Fence Construction

- Legal Considerations

(b) (5)





Approach to Complete Fence Construction

- **Government Furnished Material (GFM) and Supply Chain:**
 - The Buy American Act restricts the purchase of supplies that are not domestic products requiring 50% of the components to be produced in the U.S.
 - Exceptions include non-availability and unreasonable costs. In order to purchase steel at a reasonable cost, the CBP Head of Contracting Activity (HCA) will need to utilize FAR Part 25.2 to make a determination on cost reasonableness. Without a determination of cost reasonableness, there is a high risk of extremely high costs for steel.
 - In order to ensure steel availability on time, at a lower cost and to avoid contractors competing for materials, CBP will establish a Supply Chain Management contract to purchase and deliver steel to the sites. Contract will be similar to the Boeing contract utilized during the prior fence construction programs.
- **Procurement**
 - CBP continues to work with its service providers to establish Multiple Award Task Order Contracts (MATOC) and Indefinite Delivery Indefinite Quantity (IDIQ) Contracts to allow for an expedited contract award process for fence construction. Currently the existing contract vehicles allow for \$167M in capacity for design and \$162M in capacity for construction.





Approach to Complete Fence Construction

- Other Considerations:

(b) (5)





Border Fence Background

- Section 102(b) of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), as amended, authorizes the Department of Homeland Security (DHS) to construct border infrastructure, including fencing, in locations where such infrastructure would be most practical and effective in deterring illegal entry on the southwest border.
- The purpose of border fence construction is to provide persistent impedance to illegal cross-border activity, which offers Border Patrol agents more time to respond to and resolve threats. (b) (7)(E)
(b) (7)(E)
- To date, CBP completed 654 miles of primary pedestrian and vehicle fencing along the southwest border: approximately 354 miles of pedestrian fence and 300 miles of vehicle fence at the cost of approximately \$2.3 billion.
- It is important to note that tactical infrastructure (TI) also includes roads; (b) (7)(E) and bridges; drainage structures and grates; lighting and electrical systems; vegetation and debris removal; and tower real property, construction and maintenance.





Road Requirements

| Sector | Existing All Weather Roads | New Road Miles | ROM (-50/+100) Acquisition Cost New Roads | Road Repair Miles* | ROM (-50/+100) Repair Cost New Roads |
|--------|----------------------------|----------------|---|--------------------|--------------------------------------|
| SDC | (b) (7)(E) | (b) (7)(E) | (b) (5) | (b) (7)(E) | \$ (b) (5) |
| ELC | | | | | \$ (b) (5) |
| YUM | | | | | \$ (b) (5) |
| TCA | | | | | \$ (b) (5) |
| EPT | | | | | \$ (b) (5) |
| BBT | | | | | \$ (b) (5) |
| DRT | | | | | \$ (b) (5) |
| LRT | | | | | \$ (b) (5) |
| RGV | | | | | \$ (b) (5) |
| BLW | | | | | \$ (b) (5) |
| SPW | | | | | \$ (b) (5) |
| HVM | | | | | \$ (b) (5) |
| GFN | | | | | \$ (b) (5) |
| DTM | | | | | \$ (b) (5) |
| BUN | | | | | \$ (b) (5) |
| SWB | | | | | \$ (b) (5) |
| HLT | | | | | \$ (b) (5) |
| | | | | | \$ (b) (5) |





Road Considerations

- CBP manages an inventory of over 5,100 miles of roads identified by the U.S. Border Patrol for maintenance.
 - Roads are utilized for operational requirements include (b) (7)(E). Additionally, these roads provide access to tactical infrastructure including fence and boat ramps.
- CBP is currently in the process of obtaining both real estate access and environmental clearance to ensure maintenance can be conducted on these roads.
 - As of November 2016, 1,509 miles are fully cleared for maintenance and the remaining 3,619 miles are in the process of acquiring both real estate access and environmental clearance. CBP is in the process of acquiring real estate access and completing environmental clearances on the remaining 3,619 miles.
- The average cost to construct new roads is currently estimated at (b) (5)
 - Estimate is a rough order of magnitude (-50/+100) and includes project planning and oversight, environmental planning and compliance, environmental mitigation, real estate planning and acquisition, staffing and human capital requirements, design and construction.
- The recurring average cost to maintain existing roads is (b) (5) per mile, per year.
 - Estimates for "recurring costs" are rough order of magnitude (-50/+100) and reflect average maintenance costs per mile of road plus environmental compliance and staffing and human capital requirements.





Other Critical TI Requirements

- **Carrizo Cane Removal**

- Method: Mechanical with herbicide
- Required in:
 - All Laredo
 - All Del Rio
 - Some RGV
 - Some El Centro

- **Boat Ramps**

- RGV – 17
- LRT – TBD
- DRT – TBD





Current Tactical Infrastructure Unfunded Requirements

- Currently identified requirements from USBP that have been documented by FM&E are listed below. USBP is currently developing their full requirements list to provide to CBP leadership.
 - RGV (b) (7)(E) Phase 2, (b) (5): (b) (7)(E).
 - Rough Order of Magnitude (ROM) includes approximately (b) (5) in real estate costs.
 - RGV Fence Segments O-1 – O-3, (b) (5) Project includes the construction of (b) (7)(E) miles of primary pedestrian fence. (Note, this mileage in
 - ROM cost estimate includes 18 miles of roads to access the fence segments.
 - Assumes (b) (7)(E) bollard fence design and costs associated with real estate acquisition are not included in this estimate.
 - ELC Fence Repair / Panel Replacement, (b) (5) Project includes replacement and repair of approximately (b) (7)(E) of primary pedestrian fence.
 - YUM C-1 Sand Dunes All Weather Road Improvement, (b) (5): Project includes (b) (7)(E) of road improvements.
 - TCA Organ Pipe Maintenance and Repair, (b) (5): Requirement includes maintenance on the Organ Pipe Cactus National Monument.

